

State of Wisconsin
Duty Disability Program

January 1, 2013
Actuarial Valuation

Executive Summary

The purpose of this report is to provide the actuarial value of assets and actuarial accrued liability of the Wisconsin Duty Disability Program (“the Plan”) as of the valuation date as well as the changes in these values over the past year. This information is important to provide an understanding of the sufficiency of the contribution policy to meet the future obligations of the Plan. This report also provides a version of the information necessary for the Department of Employee Trust Funds’ financial statement disclosures under the Statement of Governmental Accounting Standards No. 43 (GASB 43).

Prior to 2011, the review of the sufficiency of the contribution policy and the GASB 43 disclosure information were contained in separate reports. Prior to this date, the actuarial reviews of the contribution policy were based on the liability for participants receiving benefits, the liability for participants who had become disabled but not yet started receiving benefits, and a reserve for conservatism.

Since 2011, the actuarial valuation has been based on the standards required under GASB 43, which necessitate that the liabilities attributable to the current active population be accrued during their working career. Therefore, a liability is determined for active participants based on expected future disablements in addition to current disabled participants and survivors.

As of January 1, 2013, the Plan is 97% funded on an actuarial basis. The current contribution policy is projected to result in the Plan becoming fully funded by December 31, 2013. With the improvement of the level of funding, the Board is considering future changes in the contribution policy.

A brief summary of the results of the current and prior GASB 43 valuations are shown below (dollar values in millions):

	<u>2012</u>	<u>2013</u>
Actuarial Accrued Liability		
Actives	\$ 118	\$ 98
Disableds and Survivors	<u>359</u>	<u>409</u>
Total	\$ 477	\$ 507
Actuarial Value of Assets	<u>\$ (449)</u>	<u>\$ (490)</u>
Unfunded Actuarial Accrued Liability	\$ 28	\$ 17
Funded ratio	94%	97%
Annual Required Contribution (GASB 43)	\$ 48	\$ 50

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June 2013

ACTUARIAL VALUATION CERTIFICATION

This report presents the results of the actuarial valuation of the State of Wisconsin Duty Disability Program (“the Plan”) as of January 1, 2013.

The State of Wisconsin provided the participant data, financial information and plan descriptions used in this valuation. The actuary has checked the data for reasonableness, but has not independently audited the data. The actuary has no reason to believe the data is not complete and accurate, and knows of no further information that is essential to the preparation of the actuarial valuation.

Actuarial information under Government Accounting Standards Board Statement No. 43 (GASB 43) is for purposes of fulfilling plan financial accounting requirements. The results have been made on a basis consistent with GASB 43 and are based upon assumptions prescribed by the State of Wisconsin.

In our opinion, all costs, liabilities, rates of interest, and other factors under the Plan have been determined on the basis of actuarial assumptions and methods that are each reasonable (or consistent with authoritative guidance), taking into account the experience of the Plan and future expectations and that, when combined, represent our best estimate of anticipated experience under the Plan.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: plan experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operations of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the Plan's funded status); and changes in plan provisions or applicable law.

Our scope did not include analyzing the potential range of such future measurements, and we did not perform that analysis.

The undersigned with actuarial credentials collectively meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinions contained herein.

Any tax advice included in this written communication was not intended or written to be used, and it cannot be used by the taxpayer, for the purpose of avoiding any penalties that may be imposed by any governmental taxing authority or agency.

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Section I - Background and Comments

The Governmental Accounting Standards Board released the Statement of Governmental Accounting Standards No. 43 (“GASB 43”) and No. 45 (“GASB 45”) in 2004. These statements require trusts (GASB 43) and employers (GASB 45) to accrue the cost of Postretirement Welfare Plans while employees who will receive these benefits are providing services to the employer. The State of Wisconsin was a Phase 1 entity for implementation of GASB 43 and was therefore required to adopt GASB 43 for the financial period beginning January 1, 2006. The purpose of this report is to provide the information required under GASB 43 to be disclosed on the Plan’s financial statements for the financial period ending December 31, 2013. This report also provides the information necessary to provide an understanding of the sufficiency of the contribution policy to meet the future obligations of the Plan.

Plan Overview

The State of Wisconsin provides duty disability benefits for protective occupation participants at no cost to the employees. There were no changes to the plan provisions since the previous valuation. The substantive plan benefits are described in Section XI of this report.

Assumptions

Where applicable, the assumptions used in this actuarial valuation were based on the assumptions used for the WRS actuarial valuation as of December 31, 2011 and the recent experience study performed by GRS. Some additional or differing assumptions were required to handle issues unique to the plan and estimate the potential offsets to the Duty Disability benefits. The actuarial methods and assumptions are described in Section X of this report.

Since the January 1, 2012 actuarial valuation, there have been several changes in assumptions. The wage inflation component of salary increase was changed to 3.20% (previously 3.50%) in accordance with the WRS actuarial valuation as of December 31, 2011 and the recent experience study performed by GRS. The merit and longevity component of salary increase was updated in accordance with the recent experience study performed by GRS. The Annual Benefit Increases before age 60 (salary-indexed increases) was changed to 3.20% (previously 3.50%) in accordance with the WRS actuarial valuation as of December 31, 2011 and the recent experience study performed by GRS. Pre-retirement mortality, post-retirement mortality, post-disability mortality, withdrawal, and retirement rates were updated in accordance with the recent experience study performed by GRS. Disability rates were updated based on the ages at which the current population of participants in pay status (with and without Social Security) began receiving disability payments as well as the number of new disabilities that have occurred over each of the past 10-20 years. The benefit adjustment for inactive members was removed in accordance with an internal analysis performed this year based on recent experience that suggested no

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significant lag in the reporting of benefit offsets in aggregate. These changes combined to increase the Unfunded Actuarial Accrued Liability (UAAL) by \$27 million.

Actuarial Experience

During 2012, the market value of assets experienced an estimated investment return of 13.7%. Compared to the investment return assumption of 7.2%, there was a market value gain of about 6.5% or \$28.6 million. The Actuarial Value of Assets uses a method to smooth investment gains and losses over a five-year period. On an actuarial value basis, there was an asset loss of \$14.8 million from the partial recognition of market value gains and losses from 2009 to 2013. The effective rate of return on investments on an actuarial value basis was 4.0%.

There was also a liability gain of \$13.3 million during 2012 primarily due to lower than expected increases in salary and disability benefits, combined with a lower than expected number of disabled participants.

Funding Policy

The program is funded entirely by employer contributions, which vary by experience. The contribution policy does not meet the GASB 43 requirements for determining an Annual Required Contribution (ARC), which requires using a consistent amortization policy for the unfunded actuarial accrued liability; therefore, an amortization policy for the purpose of determining the ARC under GASB 43 was created. The initial amortization period was selected to approximate the actual contribution policy as of January 1, 2006. Subsequent gains and losses were amortized over 15 years.

The actual contribution policy resulted in employer contributions that were \$4.6 million more than the ARC. Additional details about the policy used to determine contributions under this plan can be found in Section XI.

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Section II – Summary of Actuarial Valuation Results

Presented below are the actuarial valuation results for the State of Wisconsin Duty Disability Program. Dollar amounts are in thousands.

	<u>January 1, 2012</u>	<u>January 1, 2013</u>
a. Actuarial Accrued Liability		
- Actives	\$ 117,525	\$ 98,428
- Disableds and Survivors	<u>359,454</u>	<u>408,653</u>
- Total	\$ 476,979	\$ 507,081
b. Actuarial Value of Assets	\$ 449,177	\$ 490,137
c. Unfunded Actuarial Accrued Liability (UAAL): (a) – (b)	\$ 27,802	\$ 16,944
d. Funded ratio: (b / a)	94.2%	96.7%
e. UAAL as a percentage of covered payroll: (c / h.2)	2.2%	1.3%
f. Annual Required Contribution (ARC)		
- Normal Cost	\$ 12,542	\$ 10,469
- Amortization Payment	32,586	35,944
- Interest to End of Year	<u>3,249</u>	<u>3,342</u>
- Total	\$ 48,377	\$ 49,755
g. Discount rate	7.2%	7.2%
h. Census data used		
1. Count of Covered Participants		
- Actives	22,188	21,976
- Disableds and Survivors*	<u>964</u>	<u>973</u>
- Total	23,152	22,949
2. Covered payroll	\$ 1,285,854	\$ 1,279,908
3. Expected Benefit Payments	\$ 27,940	\$ 31,352

* Includes 59 and 49 disabled participants with zero benefits in 2012 and 2013, respectively.

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Section III – Market Value of Assets and Summary of Transactions

A summary of the transactions during 2012 of the assets for the State of Wisconsin Duty Disability Program is shown below. Dollar amounts are in thousands.

1. Market value of assets as of January 1, 2012		\$ 426,915
2. Income		
Employer Contributions	\$ 52,978	
Investment Income	<u>60,738</u>	
Total Income		\$ 113,716
3. Disbursements		
Benefit Payments	\$ 30,336	
Expenses	<u>577</u>	
Total Disbursements		\$ 30,913
4. Net Change in Assets: (2) – (3)		\$ 82,803
5. Market Value of Assets as of December 31, 2012 (1) + (4)		\$ 509,718
6. Estimated Rate of Investment Return		13.73%

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Section IV – Actuarial Value of Assets

The following table develops the Actuarial Value of Assets as of January 1, 2013. Dollar amounts are in thousands.

1. Market value of assets as of January 1, 2012	\$ 426,915
2. Contributions*	52,978
3. Benefit payments*	(30,336)
4. Assumed earnings at 7.20% on (1), (2), and (3)	<u>31,553</u>
5. Expected assets at January 1, 2013: (1) + (2) + (3) + (4)	\$ 481,110
6. Actual assets at January 1, 2013	\$ 509,718
7. Investment gain (loss)	
a. Gain (loss) for 2012: (6) – (5)	\$ 28,608
b. Gain (loss) for 2011	(28,782)
c. Gain (loss) for 2010	15,529
d. Gain (loss) for 2009	38,767
8. Gain (loss) not yet reflected in actuarial value of assets	
a. 80% of 2012 gain (loss)	\$ 22,885
b. 60% of 2011 gain (loss)	(17,269)
c. 40% of 2010 gain (loss)	6,212
d. 20% of 2009 gain (loss)	<u>7,753</u>
e. Total gain (loss) not yet reflected in actuarial value of assets:	19,581
9. Actuarial value of plan assets as of January 1, 2013: (6) - (8e)	\$ 490,137
10. Estimated rate of return on actuarial value of assets	3.98%

* Contributions and benefit payments are assumed to be paid evenly throughout the year.

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Section V – Development of Unfunded Actuarial Accrued Liability

Presented below is the development of the Unfunded Actuarial Accrued Liability as of January 1, 2013, which is the excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The Actuarial Accrued Liability is the portion of the Present Value of Future Benefits (PVFB) accrued to date. The Present Value of Future Normal Costs represents the portion of the PVFB expected to accrue in the future, based on the current population. Dollar amounts are in thousands.

a.	Present Value of Future Benefits	
	Actives	\$ 164,409
	Disableds and Survivors	<u>408,653</u>
	Total	\$ 573,062
b.	Present Value of Future Normal Costs	\$ 65,981
c.	Actuarial Accrued Liability: (a) – (b)	\$ 507,081
d.	Actuarial Value of Assets	\$ 490,137
e.	Unfunded Accrued Actuarial Liability as of January 1, 2013: (c) – (d)	\$ 16,944

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Section VI – Actuarial Experience

Actuarial gains and losses arise from experience different from that assumed, changes in actuarial assumptions and methods, and changes in plan provisions. The following summarizes the changes in the Unfunded Actuarial Accrued Liability (UAAL) due to these sources from January 1, 2012 to January 1, 2013. Dollar amounts are in thousands.

a.	UAAL as of January 1, 2012	\$ 27,802
b.	Normal Cost for 2012	12,542
c.	Annual Required Contribution for 2012	(48,377)
d.	Interest on UAAL and Normal Cost at 7.2%	<u>2,904</u>
e.	Expected UAAL as of January 1, 2013	\$ (5,129)
f.	2012 (Gain)/Loss	<u>22,073</u>
g.	UAAL as of January 1, 2013	\$ 16,944
Sources of 2012 (Gain)/Loss*		
	Demographic (gain)/loss	\$ (13,287)
	(Gain)/Loss due to assumption changes	27,030
	(Gain)/Loss due to (over)/underpayment of ARC	(4,601)
	(Gain)/loss due to asset returns	<u>12,931</u>
	Total	\$ 22,073

* See Section I for additional details regarding the sources of the 2012 gains and losses.

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Section VII – Determination of Annual Required Contribution

GASB 43 requires the disclosure of the Annual Required Contribution. The following is a brief explanation of the components of the Annual Required Contribution:

- **Normal Cost:** The portion of the total present value of benefits attributed to employee service during the current fiscal year.
- **Amortization Payments:** closed, 8-year level percent of pay amortization of the initial unfunded actuarial accrued liability, and closed 15-year level percent of pay amortizations of any future experience gains and losses, assumption changes, and contribution deficiencies or excess contributions (contributions less than or greater than the Annual Required Contribution, respectively). The total amortization of the UAAL, determined by the preceding method, will not be less than the amount necessary to create an equivalent single amortization period of 30 years (consistent with GASB 43 requirements for disclosure).

Presented below is an illustration of the expected Annual Required Contribution for the fiscal year ending December 31, 2013. Dollar amounts are in thousands.

**Annual Required Contribution
for Fiscal Year Ending
December 31, 2013**

a.	Normal Cost	\$ 10,469
b.	Amortization Payment	35,944
c.	Interest to End of Year	<u>3,342</u>
d.	Annual Required Contribution	\$ 49,755

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Section VII – Determination of Annual Required Contribution (continued)

**Schedule of Amortization Payments
(000's)**

	<u>Date Established</u>	<u>Initial Amount</u>	<u>Initial Years</u>	<u>Remaining Years</u>	<u>1/1/2013 Balance</u>	<u>2013 Amortization</u>
Initial UAAL	1/1/2006	\$ 204,397	8	1	\$ 38,074	\$ 38,074
2006 (Gain)/Loss	1/1/2007	(5,925)	15	9	(4,955)	(638)
2007 (Gain)/Loss	1/1/2008	(6,047)	15	10	(5,309)	(626)
2008 (Gain)/Loss	1/1/2009	15,364	15	11	15,315	1,672
2009 (Gain)/Loss	1/1/2010	6,256	15	12	5,885	599
2010 (Gain)/Loss	1/1/2011	(27,205)	15	13	(26,204)	(2,507)
2011 (Gain)/Loss	1/1/2012	(28,506)	15	14	(27,935)	(2,525)
2012 (Gain)/Loss	1/1/2013	22,073	15	15	<u>22,073</u>	<u>1,895</u>
Total					\$ 16,944	\$ 35,944

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Section VIII - Disclosure Information Pursuant to Statement No. 43 of the Governmental Accounting Standards Board

Governmental Accounting Standards Board (“GASB”) Statement No. 43 requires disclosure of notes to the financial statements and supplementary information that includes information shown in two schedules, the Schedule of Funding Progress and the Schedule of Employer Contributions. Table A shows the Schedule of Funding Progress. Table B shows the Schedule of Employer Contributions.

**Table A
GASB No. 43 Schedule of Funding Progress
(000’s)**

Actuarial <u>Valuation Date</u>	(a) Actuarial Value <u>of Assets</u>	(b) Actuarial Accrued <u>Liability (AAL)</u>	(c) Unfunded Actuarial Accrued Liability (UAAL) <u>(b - a)</u>	(d) Funded Ratio <u>(a / b)</u>	(e) Covered <u>Payroll</u>	(f) UAAL as a Percentage of Covered Payroll <u>(c) / (e)</u>
January 1, 2006	\$ 222,692	\$ 427,089	\$ 204,397	52.1%	\$ 1,144,529	17.9%
January 1, 2008	311,778	471,668	159,890	66.1	1,257,666	12.7
January 1, 2010	373,048	512,785	139,737	72.7	1,370,978	10.2
January 1, 2011	412,988	499,034	86,046	82.8	1,297,690	6.6
January 1, 2012	449,177	476,979	27,802	94.2	1,285,854	2.2
January 1, 2013	490,137	507,081	16,944	96.7	1,279,908	1.3

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Section VIII - Disclosure Information Pursuant to Statement No. 43 of the Governmental Accounting Standards Board (continued)

Table B
GASB No. 43 Schedule of Employer Contributions
(000's)

<u>Year Ended</u>	(a) <u>Annual Required Contribution</u>	(b) <u>Employer Contribution</u>	(c) <u>Percentage Contributed (b / a)</u>
December 31, 2006	\$ 44,397	\$ 44,566	100.4%
December 31, 2007	46,174	47,765	103.4
December 31, 2008	47,684	50,574	106.1
December 31, 2009	50,193	51,556	102.7
December 31, 2010	53,181	51,861	97.5
December 31, 2011	50,364	52,335	103.9
December 31, 2012	48,377	52,978	109.5
December 31, 2013	49,755	TBD	TBD

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Section IX – 10-Year Projection of Employer Benefit Payments

Presented below are the projected employer benefit payments for the next ten years starting in 2014 based on the current plan design. These projected benefit payments are based on the actuarial assumptions shown in Section X. If actual experience differs from that expected by the actuarial assumptions, the actual employer benefit payments will vary from those presented below. Dollar amounts are in thousands.

<u>Year</u>	<u>Total</u>
2014	\$ 32,917
2015	34,467
2016	35,990
2017	37,477
2018	38,933
2019	40,338
2020	41,660
2021	42,893
2022	44,068
2023	45,167

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Section X - Summary of Actuarial Methods and Assumptions

Actuarial Cost Method

The Actuarial Cost Method used in this valuation to determine the Actuarial Accrued Liability and the Annual Required Contribution (ARC) was the Projected Unit Credit Method with service prorated to date of disability.

Under this method, the total present value of benefits is determined by projecting the benefit to be paid after the disability date and discounting those amounts to the valuation date. The Normal Cost is computed by dividing the total present value of benefits by the participant's total service (actual plus expected service) to date of disability.

The Actuarial Accrued Liability under this method represents the total present value of benefits multiplied by the ratio of the participant's actual service to date to expected service at decrement.

The Actuarial Accrued Liability for participants currently receiving payments is calculated as the actuarial present value of future benefits expected to be paid. No normal cost is payable for these participants.

This actuarial cost method is one of the GASB 43 approved methods.

Actuarial Value of Assets

The Actuarial Value of Assets is determined using a Five-Year Smoothed Market Value. Under this method, the Actuarial Value of Assets equals the Market Value less a decreasing fraction (4/5, 3/5, 2/5, etc.) of the prior five years of investment gains and losses compared to the assumed rate of investment return (currently 7.20%).

Amortization of Unfunded Accrued Actuarial Liability

The Unfunded Accrued Actuarial Liability (UAAL) is the excess of the Accrued Actuarial Liability over the Actuarial Value of Assets. This excess will be amortized in the following ways:

- 8-year, level percent of pay, closed amortization period for the initial UAAL;
- 15-year, level percent of pay, closed amortization periods for future gains and losses; and

The total amortization of the UAAL, determined by the preceding method, will not be less than the amount necessary to create an equivalent single amortization period of 30 years (consistent with GASB 43 requirements for disclosure).

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Section X - Summary of Actuarial Methods and Assumptions (continued)

Valuation Date: January 1, 2013

Census Date: January 1, 2013

Discount Rate: 7.20% (net of expenses)

Salary Increases: Salary increase assumptions for individual active members are shown for sample services below. Part of the assumption for each age is for merit and longevity increase, and another 3.2% recognizes wage inflation, including price inflation, productivity increases, and other macroeconomic forces.

% Merit & Longevity Increase Next Year

<u>Service</u>	<u>Protective with Social Security</u>	<u>Protective w/o Social Security</u>
1	4.75%	5.50%
2	4.75	5.50
3	4.10	4.66
4	3.45	3.82
5	2.80	2.98
10	1.14	0.88
15	0.84	0.54
20	0.74	0.44
25	0.64	0.34
30	0.54	0.24

Payroll Growth: 3.2% annually

Pre-Retirement Mortality: This assumption applies to death while in service. Rates are based on the recent experience study performed by GRS. Sample rates of mortality are as follows:

<u>Age</u>	<u>Males</u>	<u>Females</u>
25	0.0184%	0.0097%
35	0.0398	0.0230
45	0.0717	0.0519
55	0.2228	0.1345

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Section X - Summary of Actuarial Methods and Assumptions (continued)

Post-Retirement Mortality: This assumption applies to spouse mortality. Rates are based on the recent experience study performed by GRS. Sample rates of mortality are as follows:

<u>Age</u>	<u>Males</u>	<u>Females</u>
45	0.1303%	0.0943%
55	0.4050	0.2445
65	0.8752	0.5408
75	2.4683	1.6645
85	8.4634	6.2186

Post-Disability Mortality: This assumption applies to death after disablement. Rates are based on the recent experience study performed by GRS. Sample rates of mortality are as follows:

<u>Age</u>	<u>Males</u>	<u>Females</u>
45	0.2512%	0.1576%
55	0.6654	0.4021
65	1.9079	1.0968
75	6.3302	3.7543
85	18.7785	13.1729

Disability: Percent of employees expected to become disabled each year are as follows:

<u>Age</u>	<u>Rate of Disablement</u>
20	0.01%
25	0.02
30	0.09
35	0.13
40	0.18
45	0.24
50	0.35
55	0.20
60	0.20

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Section X - Summary of Actuarial Methods and Assumptions (continued)

Withdrawal: Percent of employees expected to terminate each year within the first 10 years of employment are as follows:

<u>Service</u>	<u>Protective with Social Security</u>	<u>Protective w/o Social Security</u>
0	15.0%	4.0%
1	7.0	3.5
2	4.3	2.1
3	3.8	1.3
4	3.4	1.2
5	2.6	1.1
6	2.5	1.0
7	2.3	0.9
8	2.0	0.8
9	1.7	0.7

Percent of employees expected to terminate each year after the first 10 years of employment are as follows:

<u>Age</u>	<u>Protective with Social Security</u>	<u>Protective w/o Social Security</u>
25	1.58%	0.70%
30	1.58	0.70
35	1.38	0.67
40	1.18	0.62
45	1.07	0.57
50	1.02	0.52
55+	1.00	0.50

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Section X - Summary of Actuarial Methods and Assumptions (continued)

Retirement: Percent of employees expected to retire each year are as follows.

<u>Age</u>	<u>Protective with Social Security</u>	<u>Protective w/o Social Security</u>
50	6.0%	3.5%
51	7.0	3.8
52	8.0	4.5
53	23.0	17.0
54	18.0	25.0
55	17.0	21.0
56	16.0	27.0
57	16.0	30.0
58	16.0	30.0
59	16.0	30.0
60	18.0	26.0
61	18.0	15.0
62	22.0	20.0
63	29.0	40.0
64	16.0	40.0
65	30.0	40.0
66	20.0	40.0
67	15.0	40.0
68	25.0	40.0
69	20.0	40.0
70	100.0	100.0

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Section X - Summary of Actuarial Methods and Assumptions (continued)

Benefit Offsets: There are many potential offsets to the member’s basic benefit. The following assumptions estimate those offsets.

<u>Offset</u>	<u>Valuation Estimate</u>
WRS Benefits and LTDI	<p>Assume 20% of members qualify for a WRS disability benefit or LTDI.</p> <p>Assume 10% of members under age 50 who do not qualify for a WRS disability benefit or LTDI elect to receive a WRS separation benefit.</p> <p>Assume other members commence a WRS retirement benefit at age 50 (requirement of plan).</p> <p>Benefits are based on plan provisions and actuarial assumptions stated above.</p>
Social Security	<p>Assume 10% of members covered by Social Security qualify for a Social Security disability award.</p> <p>Benefits are based on Social Security formula and assuming:</p> <ul style="list-style-type: none"> • 3.2% pay increases • 3.2% Social Security Taxable Wage Base increases • 2.5% cost-of-living adjustments
Unemployment Compensation:	<p>None (No offsets observed)</p>
Combined Offset from: <ul style="list-style-type: none"> • Worker’s Compensation • Employer Earnings • Other Earnings 	<p>Assume 3% reduction to 75%/80% target benefit (Observed reduction from all these offsets was about 3.1% of target benefit. This observation does not include a review of income tax returns or one-time earnings offsets as observation is taken from the December Payroll of each year.)</p>

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Section X - Summary of Actuarial Methods and Assumptions (continued)

Active Members Included:	Only currently eligible WRS active members were included.
Expenses:	None included.
Future Service:	All members earn a full year of service in each calendar year.
Marital Status:	100% of members are married. Husbands are assumed to be three years older than their wives.
Dependents:	No dependent children are assumed to be covered at retirement.
Annual Benefit Increases:	Before age 60 (salary-indexed increases): 3.20% After age 60 (WRS dividend-based increases): 2.10%
Benefit Adjustments for Current Inactives:	None.
Changes Since Prior Valuation:	The following assumptions were changed: <ul style="list-style-type: none">- Wage inflation component of salary increase- Merit and longevity component of salary increase- Annual benefit increases before age 60 (salary-indexed increases)- Pre-retirement mortality rates- Post-retirement mortality rates- Post-disability mortality rates- Withdrawal rates- Retirement rates- Disability rates- Benefit adjustment for inactive members

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Section XI - Summary of Substantive Plan Provisions

Participants Included: State and local protective occupation active employees, and retirees and their survivors who are currently receiving duty disability program benefits

Benefit Eligibility: Member must satisfy all of the following

- injured while performing duties or contracted disease due to occupation
- disability is work-related
- disability is expected to be permanent

Also, the disability must result in one of the following

- reduction in pay or position
- assignment to light duty
- retirement
- impairs promotional opportunities

Member Benefits: 80% of salary (75% for local employees who are not eligible for a Social Security disability award and not eligible for a WRS disability benefit or LTDI). For local members who have been terminated but not approved for WRS disability or LTDI only, the percentage is reduced by 0.5% for each month of WRS creditable service over 25. For local members who have not been terminated or have been approved for WRS disability or LTDI, the percentage is reduced by 0.5% per month for every month over 30 years. For all members, the offsets are as follows (with mandatory commencement ages in parenthesis if applicable):

- Any Social Security benefit based upon the participant's work record (age 62; if not already receiving SSDI)
- Unemployment compensation
- Worker's Compensation
- Any WRS retirement, separation, or disability benefit based upon member's earnings and service (age 50)
- all earnings from the employer where the disability occurred
- a percent of other earnings as follows:
 - 1/3 of earnings less than 40% of salary

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Section XI - Summary of Substantive Plan Provisions (continued)

- 1/2 of earnings between 40% and 80% of salary
- 2/3 of earnings over 80% of salary
- a 5% reduction for non-state members who have not filed a Worker's Compensation claim for permanent disability

**Annual Increases in
Member Benefits:**

Individuals receive an annual increase of either 1 or 2 below.

- 1) Social Security salary index for the following individuals:
 - under age 60, or
 - older than 60 and receiving a regular disability retirement or regular LTDI
- 2) Prior year's WRS core annuity dividend for the following individuals:
 - over age 60 and receiving special disability retirement or special LTDI, or
 - over age 60 not receiving any regular disability retirement or LTDI, or
 - receiving a duty disability death benefit

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Section XI - Summary of Substantive Plan Provisions (continued)

- Survivor Benefits:**
- State employees and pre-5/3/88 applications for local employees
 - 1/3 of the participant's monthly salary at time of death to surviving spouse or domestic partner (State employees only), plus
 - \$15/month to the guardian of each unmarried child under the age of 18
 - not to exceed 65% of the participant's monthly salary at time of death
 - no annual adjustments
 - Post-5/3/88 applications for local employees
 - 1/2 of the participant's monthly salary at time of death to surviving spouse less other income sources that are based on the participant's earnings record, plus
 - 1/10 of the participant's monthly salary at time of death to each unmarried child under the age of 18
 - not to exceed 70% of the participant's monthly salary at time of death less offsets for other income
 - subject to annual adjustments based on salary indexing
 - Cancer Presumptive Law (state and local)
 - 70% of the participant's monthly salary at time of death to surviving spouse or domestic partner, less other income sources that are based on the participant's earnings record
 - 1/10 of the participant's monthly salary at time of death to the guardian of each unmarried child under the age of 18, as long as there is no surviving spouse or domestic partner
 - there is no maximum on dependent benefits
 - subject to annual adjustments based on salary indexing
- Survivor benefits are offset by Chapter 102 Worker's Compensation death benefits
- Contributions:** Funded entirely by Employer contributions, which vary by experience as detailed in the following table.

**State of Wisconsin
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Section XI - Summary of Substantive Plan Provisions (continued)

Contribution Rate Schedule

% of Covered Payroll	Applicable To
1.9	Groups with claims payout during the prior year of less than or equal to 0.5% of payroll.
2.4	Groups with one claim in which the payout during the prior year exceeded 0.5% of payroll, and groups with two or more claims in which the payout was more than 0.5% but less than 1.0% of payroll.
3.6	Groups with two or more claims in which the payout during the prior year was more than 1.0% but less than 2.0% of payroll.
5.4	Groups with two or more claims in which the payout during the prior year was more than 2.0% and less than 3.0% of payroll.
6.6	Groups with two or more claims in which the payout exceeded 3.0% but was less than 6.6% of payroll during the prior year.
6.6 + ½ of claims over 6.6%	Groups with two or more claims in which the payout exceeded 6.6% of payroll during the prior year.

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Section XII - Summary of Participant Demographic Information

The participant data used in the valuation was provided by the State of Wisconsin as of January 1, 2013. While the participant data was checked for reasonableness, the data was not audited, and the valuation results presented in this report are dependent upon the accuracy of the participant data provided. The table below presents a summary of the basic participant information for the active and inactive participants covered under the terms of the Plan.

	<u>Protective with Social Security</u>	<u>Protective w/o Social Security</u>	<u>Total</u>
a. Active participants			
Count	19,275	2,701	21,976
Average Age	40.7	41.4	40.8
Average Service	12.8	14.4	13.0
Average 2013 Pay	\$56,562	\$70,408	\$58,263
b. Disabled participants and Survivors*			
Count			973
Average Age			60.6
Average Current Benefit			\$31,822

* Includes 49 disabled participants with zero benefits.

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Section XII - Summary of Participant Demographic Information (continued)

Distribution by Age, Service and Average 2013 Pay – Actives – Protective without Social Security

Service Age Group	Under 4		5 to 9		10 to 14		15 to 19		20 to 24		25 to 29		30+		All Years	
	Count	Avg Pay	Count	Avg Pay	Count	Avg Pay	Count	Avg Pay	Count	Avg Pay	Count	Avg Pay	Count	Avg Pay	Count	Avg Pay
Under 25	60	\$ 41,583	-	\$ -	-	\$ -	-	\$ -	-	\$ -	-	\$ -	-	\$ -	60	\$ 41,583
25 to 29	203	48,987	81	67,011	-	-	-	-	-	-	-	-	-	-	284	54,127
30 to 34	121	53,846	180	67,215	83	69,900	-	-	-	-	-	-	-	-	384	63,583
35 to 39	42	54,960	82	67,453	234	70,625	80	75,935	-	-	-	-	-	-	438	69,499
40 to 44	16	49,859	53	69,728	164	71,484	215	74,474	76	79,807	-	-	-	-	524	73,080
45 to 49	10	42,549	15	67,223	67	71,786	131	76,256	202	76,795	50	82,352	1	85,336	476	75,522
50 to 54	3	62,612	8	65,939	24	73,916	57	75,183	123	79,341	126	84,277	43	88,854	384	80,660
55 to 59	3	66,772	2	76,145	2	73,145	15	79,302	52	79,498	39	81,692	24	84,399	137	80,539
60 to 64	-	-	-	-	1	107,882	1	80,299	3	74,408	3	94,041	5	81,414	13	84,661
65 & Up	-	0	1	97,380	-	-	-	-	-	-	-	-	-	-	1	97,380
Total	458	\$49,944	422	\$67,628	575	\$71,111	499	\$75,414	456	\$78,276	218	\$83,508	73	\$86,831	2,701	\$70,408

Distribution by Age, Service and Average 2013 Pay – Actives – Protective with Social Security

Service Age Group	Under 4		5 to 9		10 to 14		15 to 19		20 to 24		25 to 29		30+		All Years	
	Count	Avg Pay	Count	Avg Pay	Count	Avg Pay	Count	Avg Pay	Count	Avg Pay	Count	Avg Pay	Count	Avg Pay	Count	Avg Pay
Under 25	630	\$ 31,171	18	\$ 40,912	-	\$ -	-	\$ -	-	\$ -	-	\$ -	-	\$ -	648	\$ 31,442
25 to 29	1,562	\$ 42,719	768	52,675	16	50,118	-	-	-	-	-	-	-	-	2,346	46,029
30 to 34	706	\$ 40,865	1,421	55,639	859	57,050	15	52,921	-	-	-	-	-	-	3,001	52,554
35 to 39	351	\$ 39,683	598	54,337	1,588	59,925	564	62,659	4	64,442	-	-	-	-	3,105	57,063
40 to 44	235	\$ 39,373	376	51,813	967	58,300	1,559	64,121	503	67,116	3	86,622	-	-	3,643	60,141
45 to 49	145	\$ 35,613	228	49,284	473	55,948	707	63,462	1,134	70,524	317	73,210	4	60,810	3,008	63,550
50 to 54	97	\$ 36,166	154	47,252	302	52,791	318	61,576	513	68,101	557	75,094	177	74,518	2,118	64,335
55 to 59	62	\$ 29,478	101	45,980	162	49,533	164	58,345	175	64,410	138	66,030	175	75,022	977	58,933
60 to 64	27	\$ 21,667	37	46,502	83	48,882	58	54,606	57	60,298	43	65,330	62	68,844	367	54,617
65 & Up	14	11,267	7	37,129	14	53,687	11	48,693	8	59,930	1	93,562	7	80,385	62	45,816
Total	3,829	\$39,081	3,708	\$53,227	4,464	\$57,479	3,396	\$62,962	2,394	\$68,553	1,059	\$73,002	425	\$73,865	19,275	\$56,562

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Section XII - Summary of Participant Demographic Information (continued)

Distribution by Age, Service and Average 2013 Pay – Actives – Total

Service Age Group	Under 4		5 to 9		10 to 14		15 to 19		20 to 24		25 to 29		30+		All Years	
	Count	Avg Pay	Count	Avg Pay	Count	Avg Pay	Count	Avg Pay	Count	Avg Pay	Count	Avg Pay	Count	Avg Pay	Count	Avg Pay
Under 25	690	\$ 32,077	18	\$ 40,912	-	\$ -	-	\$ -	-	\$ -	-	\$ -	-	\$ -	708	\$ 32,301
25 to 29	1,765	43,440	849	54,043	16	50,118	-	-	-	-	-	-	-	-	2,630	46,903
30 to 34	827	42,765	1,601	56,940	942	58,182	15	52,921	-	-	-	-	-	-	3,385	53,805
35 to 39	393	41,316	680	55,919	1,822	61,299	644	64,308	4	64,442	-	-	-	-	3,543	58,600
40 to 44	251	40,042	429	54,026	1,131	60,212	1,774	65,376	579	68,782	3	86,622	-	-	4,167	61,768
45 to 49	155	36,060	243	50,391	540	57,913	838	65,462	1,336	71,472	367	74,456	5	65,715	3,484	65,186
50 to 54	100	36,960	162	48,175	326	54,346	375	63,644	636	70,275	683	76,788	220	77,320	2,502	66,841
55 to 59	65	31,199	103	46,566	164	49,821	179	60,101	227	67,866	177	69,481	199	76,152	1,114	61,590
60 to 64	27	21,667	37	46,502	84	49,584	59	55,041	60	61,004	46	67,202	67	69,782	380	55,645
65 & Up	14	11,267	8	44,660	14	53,687	11	48,693	8	59,930	1	93,562	7	80,385	63	46,634
Total	4,287	\$40,241	4,130	\$54,698	5,039	\$59,035	3,895	\$64,557	2,850	\$70,109	1,277	\$74,796	498	\$75,766	21,976	\$58,264

**State of Wisconsin
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Section XII - Summary of Participant Demographic Information (continued)

Distribution by Age and Average Current Benefits – Disableds and Survivors

Age Group	Count*	Average Current Benefit
Under 35	4	\$ 32,263
35 to 39	17	35,082
40 to 44	39	39,493
45 to 49	81	44,952
50 to 54	141	35,200
55 to 59	166	33,875
60 to 64	188	32,136
65 to 69	141	26,261
70 to 74	109	24,182
75 to 79	60	24,871
80 to 84	23	21,474
85 to 89	4	25,729
Total	973	\$ 31,822

* Includes 49 disabled participants with zero benefits.